REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claim 1 is currently being amended. Support for the amendments to claim 1 can be found at least in the specification in paragraphs [0040], [0046], [0047] and [0083], for example.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-13 are now pending in this application.

Rejection under 35 U.S.C. § 102

Claims 1-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,965,690 to Matsumoto ("Matsumoto"). Applicants respectfully traverse this rejection for at least the following reasons.

Independent claim 1, as amended, recites:

> A three-dimensional shape measurement apparatus comprising:
>
> a first three-dimensional sensor having a projecting device for projecting a light pattern on a target area, and an image capturing apparatus placed at a first interval from the projecting device to capture an image of the target area on which the light pattern is projected;
>
> a second three-dimensional sensor having a projecting device for projecting a light pattern on the target area, and an image capturing apparatus placed at a second interval longer than the first interval from the projecting device to capture an image of the target area on which the light pattern is projected;
>
> three-dimensional information computing means for obtaining external shape information on an object present in the target area based on a first shift of the pattern on an image acquired with the first three-dimensional sensor,
>
> *wherein said first shift of the pattern is a shift from a base image captured at a time point at which the object is not present in the target area to*

a captured image captured at an arbitrary time point at which the object is present in the target area;

variation information computing means for obtaining variation information on the object based on a second shift of the pattern on the image acquired with the second three-dimensional sensor,

wherein said second shift of the pattern is a shift from a reference image captured at a first arbitrary time point at which the object is present in the target area to a captured image captured at a second arbitrary time point after the first arbitrary time point with enough time interval for detecting a movement of the object and at which the object is present in the target area; and

information composing means for composing the external shape information and the variation information.

Matsumoto fails to disclose or suggest either of the above italicized features of claim 1 in the context of that claim, or their resultant advantages.

Matsumoto discloses a system with a pattern projecting section 12 for projecting a pattern onto a target 10, where the target with the pattern projected is captured by light receiving sections 13 (FIG. 1). The Matsumoto system also includes a controlling section 14 and a processing section 15 that receives captured image data (col. 11, lines 17-20). The Matsumoto system is directed to determining the rough shape of a target object by a silhouette method, and determining the detailed shape of the object by a triangulation method (abstract).

Matsumoto, however, in contrast to claim 1, fails to disclose a system that is configured to have either of the above italicized features of claim 1. That is, Matsumoto does not disclose or suggest either a first or second shift of the pattern as specifically recited in claim 1.

Moreover, Matsumoto does not realize the advantages of the above italicized features of both a first shift pattern and a second shift pattern. The two shift patterns as recited in conjunction with the other features of claim 1 make it possible to simultaneously grasp the states of various parts of the object, for example the overall shape of the object as well as the state of motion of the object, including small motion such as the breath motion of a person. Indeed, Matsumoto is merely directed to determining the rough shape and detailed shape of an object by different methods, and is not particularly concerned with determining the motion of an object.

The dependent claims are patentable for at least the same reasons as independent claim 1, from which they depend either directly or indirectly, as well as for further patentable features recited therein.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date March 23, 2009 By Thomas G. Bilodeau

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 945-6162
Facsimile: (202) 672-5399

Pavan K. Agarwal
Attorney for Applicant
Registration No. 40,888

Thomas G. Bilodeau
Attorney for Applicant
Registration No. 43,438